

WHAT IS CLAIMED IS:

1. A semiconductor integrated circuit comprising:
- a clock non-synchronous type circuit for performing data read operation on the basis of a read control signal and outputting read data from a data output node asynchronously with a clock signal;
- a clock synchronous type circuit for receiving the read data through a data input node in synchronism with the clock signal;
- data storage circuits connected in parallel between the data output node and the data input node;
- a first transfer timing determining circuit for selecting one of said data storage circuits and transferring the read data output from said clock non-synchronous type circuit to said selected one data storage circuit, said first transfer timing determining circuit transferring the read data on the basis of a first control signal representing that the read data is output from said clock non-synchronous type circuit;
- and
- a second transfer timing determining circuit for selecting one of said data storage circuits and transferring the read data stored in said selected one data storage circuit to said clock synchronous type circuit, said second transfer timing determining circuit transferring the read data on the basis of a second control signal synchronous with the clock signal.

2. A circuit according to claim 1, wherein each of said data storage circuits comprises a latch circuit for latching the read data, a first switching circuit connected between the data output node and said latch circuit, and a second switching circuit connected between the said latch circuit and the data input node.

3. A circuit according to claim 2, wherein said first transfer timing determining circuit controls said switching circuit, and said second transfer timing determining circuit controls said second switching circuit.

4. A circuit according to claim 1, wherein each of said data storage circuits comprises first and second latch circuits having a switching function and connected in series between the data output node and the data input node.

5. A circuit according to claim 4, wherein said first transfer timing determining circuit controls said first latch circuit, and said second transfer timing determining circuit controls said second latch circuit.

6. A circuit according to claim 1, wherein each of said data storage circuits comprises first and second flip-flop circuits connected in series between the data output node and the data input node.

7. A circuit according to claim 6, wherein said first transfer timing determining circuit controls said first flip-flop circuit, and said second transfer

timing determining circuit controls said second  
flip-flop circuit.

8. A circuit according to claim 1, wherein the  
first control signal is output from said clock  
5 non-synchronous type circuit and asynchronous with the  
clock signal.

9. A circuit according to claim 1, wherein the  
first control signal is generated on the basis of the  
read control signal, and is output from said clock  
10 non-synchronous type circuit after a lapse of a delay  
time corresponding to a time interval between the  
instant at which the data read operation is started and  
the instant at which the read data is output from said  
clock non-synchronous type circuit.

10. A circuit according to claim 1, wherein the  
second control signal determines a timing of transfer  
of the read data to said clock synchronous type circuit  
on the basis of the read control signal.

11. A circuit according to claim 1, wherein said  
20 clock non-synchronous type circuit has a function of a  
DRAM which operates asynchronously with the clock  
signal.

12. A semiconductor integrated circuit comprising:  
a clock non-synchronous type circuit for  
25 performing data read operation on the basis of a read  
control signal and outputting read data from a data  
output node asynchronously with a clock signal;

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a clock synchronous type circuit for receiving the read data through a data input node in synchronism with the clock signal;

a selection circuit;

5 first data storage circuits connected in parallel between the data output node and said selection circuit;

a second data storage circuit connected between said selection circuit and the data input node;

10 a first transfer timing determining circuit for selecting one of said first data storage circuits and transferring the read data output from said clock non-synchronous type circuit to said selected one first data storage circuit, said first transfer timing  
15 determining circuit transferring the read data on the basis of a first control signal representing that the read data is output from said clock non-synchronous type circuit; and

a second transfer timing determining circuit for  
20 determining a timing of transfer of the read data stored in said second data storage circuit to said clock synchronous type circuit, said second transfer timing determining circuit transferring the read data on the basis of a second control signal synchronous  
25 with the clock signal.

13. A circuit according to claim 12, wherein said selection circuit has a function of transferring the



of the read data to said clock synchronous type circuit  
on the basis of the read control signal.

20. A circuit according to claim 12, wherein said  
clock non-synchronous type circuit has a function of a  
5 DRAM which operates asynchronously with the clock  
signal.

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